

Title (en)  
CIRCUMFERENTIALLY ORIENTED FLEXURE SUSPENSION

Publication  
**EP 0167133 B1 19881207 (EN)**

Application  
**EP 85108053 A 19850628**

Priority  
US 62551884 A 19840628

Abstract (en)  
[origin: US4694703A] A two-axis, monolithic, flexure hinge suspension system for an accelerometer or gyroscope has first, second and third cylindrical portions which are slightly axially spaced from each other along a common axis and are connected by pairs of flexible hinges therebetween. Each pair of flexible hinges is mutually perpendicular to another pair of flexible hinges and is also perpendicular to the common axis. Each flexural hinge comprises a pair of flexure leaves extending between adjacent cylindrical portions and joined together at the crossing portions thereof. One of the leaves in the flexure extends downwardly from an arcuate wall of one of the cylindrical portions to an arcuate wall of another cylindrical portion at about a 55 DEG angle to a vertically oriented common axis. The other leaf in the flexure extends upwardly from an arcuate wall portion in the one cylindrical portion to an arcuate wall in the other cylindrical portion at about a 55 DEG angle to the vertically oriented common axis. The leaves are cylindrically mounted to the cylindrical portions such that one of the leaves is in tension and one of the leaves is in compression. The cylindrical mounting eliminates frequency sensitive changes in the flexure leaves which affect G-sensitivity drift of the inertially sensitive device.

IPC 1-7  
**G01C 19/22**

IPC 8 full level  
**G01C 19/22** (2006.01)

CPC (source: EP US)  
**G01C 19/22** (2013.01 - EP US); **Y10T 74/1293** (2015.01 - EP US); **Y10T 403/54** (2015.01 - EP US)

Cited by  
WO2024028123A1

Designated contracting state (EPC)  
DE FR GB

DOCDB simple family (publication)  
**EP 0167133 A1 19860108; EP 0167133 B1 19881207**; DE 3566734 D1 19890112; US 4694703 A 19870922

DOCDB simple family (application)  
**EP 85108053 A 19850628**; DE 3566734 T 19850628; US 62551884 A 19840628